



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Wednesday 201901204

De-addiction tablets

No trace of 5 crore de-addiction tablets (The Tribune: 201901204)

<https://www.tribuneindia.com/news/nation/no-trace-of-5-crore-de-addiction-tablets/869767.html>

Punjab issues notice to 23 centres under the NDPS Act

The illegal sale of over five crore tablets of de-addiction drug Buprenorphine-Naloxone by private centres in 11 months has shocked the Punjab Government which has issued a notice to 23 de-addiction homes and a pharma company under the NDPS Act.

Buprenorphine-Naloxone is a highly addictive drug and its misuse can itself lead to addiction. For greater transparency, the government had last year put in place a standard operating procedure (SOP) for private and government centres, making it mandatory to upload the record of every tablet procured and dispensed on the Government Central Registry online in real time.

According to sources, the Food and Drug Administration collected and analysed data on the number of medicines procured and dispensed by these centres in the past 11 months (January-November). It found while 8.33 crore tablets of Buprenorphine-Naloxone were procured by 70 private centres, only 3.02 crore were sold online.

There is no trace of 5.3 crore tablets, which make up for 70 per cent of the total tablets dispensed in the past 11 months.

The government suspects that either these had gone into the hands of unauthorised persons or were sold illegally. It has, hence, served a show-cause notice on 23 centres and a pharma based in Uttarakhand for “unaccounted” sale of three crore tablets. Also, a Chandigarh-based company has been found to have sold 65 lakh tablets.

Other centres have been issued notices under the Punjab Substance Use Disorder Treatment and Counselling and Rehabilitation Centres Rules 2011. Since Buprenorphine-Naloxone falls is a psychotropic substance, any illegal sale of the drug invites action under the NDPS Act. The state government has given licences to about 75 centres to sell the medicine.

Health Minister Balbir Singh Sidhu didn't take calls despite several attempts. A message left with his staff failed to elicit a response.

Through a series of stories in January, The Tribune had first highlighted how the de-addiction drug had become the new addiction and was being

Illegally smuggled by Uttrakhand and Gujarat-based pharmacies.

State's cancer care model

State's cancer care model to be adopted in country (The Tribune: 201901204)

<https://www.tribuneindia.com/news/punjab/state-s-cancer-care-model-to-be-adopted-in-country/869886.html>

A "hub and spoke" model for the treatment of cancer established in Punjab under the aegis of the Department of Atomic Energy (DAE), is to be replicated in other parts of the country as it has been successful in providing medicare at the grass-roots level.

Under the model, a hub or nodal centre has been established at Mullanpur near Chandigarh at a spoke (subsidiary centre) at Sangrur in collaboration with the Tata Memorial Centre (TMC), Mumbai, a grant-in-aid organisation under the DAE that is the oldest and largest cancer centre in the country.

At present, almost 8,000 patients are being treated annually in the Sangrur spoke at highly subsidised rates with adequate financial support from Punjab. In addition, the state government is operating six spokes on their own at Faridkot, Bathinda, Patiala, Amritsar, Fazilka and Hoshiarpur. A presentation on the functioning of the model was made before the Parliament's Standing Committee on Science and Technology, Environment, Forests and Climate Change recently by representatives of DAE, TMC and the state government.

"Members of the committee evinced great interest in this model and suggested adoption of similar model in different states of the country," the committee's latest report tabled a few days ago states. TMC plans to address the increasing burden of cancer in India by creating about 30 hubs and 100-130 spokes.

Cancer has emerged as a serious issue in the medical field with rising incidence. The incidence of cancer in India is estimated to be 16 lakh annually, with a mortality rate of about eight lakh. Many areas of Punjab, specially the southern part, have witnessed a spike in cancer cases because of highly contaminated soil and groundwater as well as other anthropological factors.

The committee was told by experts that the current infrastructure in the country for treating cancer is grossly inadequate and two-thirds of the cancer care is actually provided in the private sector. As a result every year, almost six crore of India's population goes below the poverty

line because of the catastrophic healthcare-related expenditure on cancer, according to the committee's report.

It was submitted before the committee that common and less complex cancer care facilities should be provided close to patients' homes (spokes) to create minimum disruption in their lives and that of their families.

152 cases in Fazilka in a year

Fazilka: As many as 152 cancer patients have been detected in Fazilka district this year. Sources said contaminated drinking water, excessive use of fertilisers and insecticides is said to be the cause of the dreaded disease. Fazilka Deputy Commissioner Manpreet Singh Chhatwal said the state government had disbursed Rs 2.12 crore from the Chief Minister Relief Fund for 152 patients who approached the authorities for financial assistance. OC



State's fiscal health worries

State's fiscal health worries ministers (The Tribune: 201901204)

<https://www.tribuneindia.com/news/punjab/state-s-fiscal-health-worries-ministers/869721.htm>

Punjab's ministers, who met for a Cabinet meeting yesterday, have expressed "serious" concern over the state's worsening fiscal health, especially with urban local bodies polls scheduled in February.

Most of these urban local bodies are presently under the control of the Akali-BJP combine. Elections to 120 Municipal Councils and Nagar Panchayats and nine Municipal Corporations, are due now. These elections will be a litmus test for the Congress and Akali-BJP combine.

However, with the state's depleting fiscal health, there has been little development in these municipal areas. At least two ministers — Local Bodies Minister Brahm Mohindra and Transport Minister Razia Sultana — pointed out that this could be a sore point, and immediate steps were needed to boost spending.

The assessment of first seven months' revenue has shown a fall of almost Rs 6,200 crore. As much as 48.5 per cent of this has been spent on payment of salaries and pensions; over 20 per cent expenditure has been made on payment of interest on loans. Hence, there has been very little revenue available for infrastructure or routine development in urban areas.

Sources said concerned about the shortfall in revenue, some ministers have recommended a special Cabinet meeting to firm up a strategy to mop up revenues, and use it in urban areas before the elections are announced.

73% drinking water samples

73% drinking water samples in F'bad fail chlorination test (The Tribune: 201901204)

<https://www.tribuneindia.com/news/haryana/73-drinking-water-samples-in-f-bad-fail-chlorination-test/869695.html>

Chlorinators at a majority of tubewells, pumps either dysfunctional or lack chlorine

Only 580 of the 2,185 water samples collected between January 1 and November 30 show presence of chlorine, says Dr Ram Bhagat, Deputy Chief Medical Officer and test cell in-charge

Water supplied from MC tubewells safe as chlorination is done regularly at the source of supply, says MC Chief Engineer DR Bhaskar; he adds samples were not collected in the presence of MC officials

Health officials termed chlorination as a mandatory measure to check the growth of bacteria and viruses. Civic body officials claimed that proper chlorination was being done at the point of bulk supply on a regular basis.

A total of 73.42 per cent of the samples of drinking water supplied by the municipal corporation (MC) are non-chlorinated. The Health Department collected the samples from tubewells and water supply lines between January 1 and November 30.

Health officials termed chlorination as a mandatory measure to check the growth of bacteria and viruses. Civic body officials claimed that proper chlorination was being done at the point of bulk supply on a regular basis.

According to a report of the Health Department, officials did not find 1,605 of the 2,185 samples chlorinated. “Only 580 samples exhibited presence of chlorine in water,” said Dr Ram Bhagat, Deputy Chief Medical Officer and test cell incharge.

It was alleged that chlorinators installed by the MC at a majority of tubewells and pumps were either dysfunctional or had no chlorine. The samples were put to the orthotolidine test, in which the level of free and combined chlorine residue was determined.

Dr Bhagat said chlorination of piped water supply was important as it checked the presence of certain bacteria and viruses that could render water unsafe for consumption. Drinking untreated water could result in health disorders like cholera, typhoid and dysentery, especially in children.

Civic body Chief Engineer DR Bhaskar said water supplied from its tubewells was safe as chlorination was being done regularly at sources of supply like boosters. He pointed out that the samples were not lifted in the presence of MC officials.

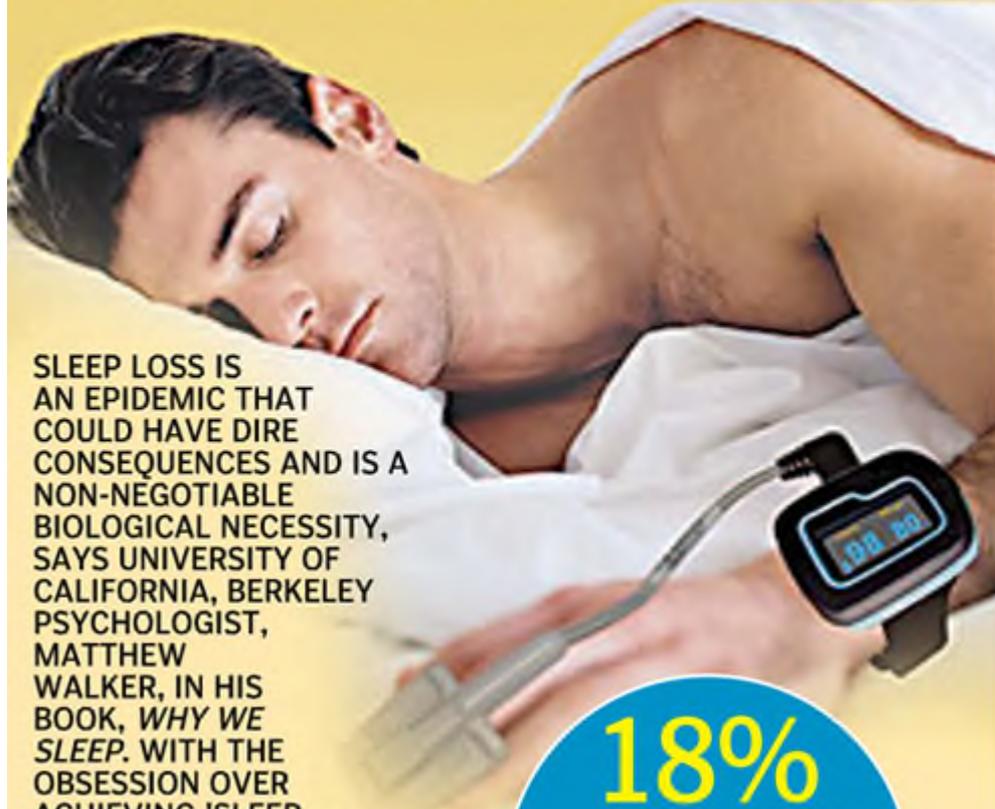
He claimed that the samples could have been taken from tail ends, where chlorination effect could be the minimum. He said only surface water and stored water required chlorination and not underground water. The city has 1,450 tubewells and 75 booster stations for water supply.



Sleeping (The Asian Age: 201901204)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=14215995>

SLEEP TRACKING LEADING TO NEW DISORDER



SLEEP LOSS IS AN EPIDEMIC THAT COULD HAVE DIRE CONSEQUENCES AND IS A NON-NEGOTIABLE BIOLOGICAL NECESSITY, SAYS UNIVERSITY OF CALIFORNIA, BERKELEY PSYCHOLOGIST, MATTHEW WALKER, IN HIS BOOK, *WHY WE SLEEP*. WITH THE OBSESSION OVER ACHIEVING 'SLEEP EFFICIENCY' PERHAPS AT ITS PEAK IN HUMAN HISTORY, SLEEP TRACKERS LIKE FITBIT, WHICH MEASURE THE DURATION AND QUALITY OF SLEEP, THE GLOBAL SLEEP-TRACKING MARKET IS EXPECTED TO RISE IN THE NEAR FUTURE. BUT, SCIENTISTS SUGGEST THAT ALL THE TRACKING AND CALCULATION ON SLEEP TIME ARE ONLY ADDING TO THE WOES IN DEVELOPING SLEEP DISORDERS

18%

The global sleep-tracking market topped \$1 billion in 2016 and it is expected to increase by another 18 percent by 2024.

■ Maiken Nedergaard, a neuroscientist leading a research showing the biological value of sleep, documented how during sleep, fluid washes over our brains, clearing out toxins like beta amyloid, which is linked to neuro-degenerative diseases.

■ Results in research made her anxious about her own bedtime priorities, to the point that she now says she takes sleep very seriously.

■ There exists a range of gadgets offering the illusion of science, with reports full of numbers and charts purporting to show just how well we're performing while sleeping.

■ Fitbit kicked off this trend when it released the first tracker in 2009, which couldn't monitor heart rate but included a sleep tracker

■ Sleep is now considered as the pinnacle of well-being as a lifestyle trend. Ironically, scientists say, with much by agony over sleep, it is also turning into a source of anxiety, which is in turn keeping people up at night.

■ Fitbits and Apple Watches around wrists, Beddits and Emfits beneath sheets and mattresses and sensors that promise to monitor

Malaria

Malaria deaths in India below 10K for first time (Hindustan: 201901204)

<https://epaper.hindustantimes.com/Home/ArticleView>

India continued to build on its recent success in controlling malaria, with the number of annual deaths going below 10,000 for the first time ever in 2018, a 41% reduction over 2017, according to the World Health Organization's (WHO) World Malaria Report 2019 released on Wednesday.

Malaria cases in the country declined by 28% in 2018 compared to 2017; there was a 24% reduction in cases between 2016 and 2017.

There were an estimated 6,737,000 malaria cases and 9,620 deaths in India in 2018, down from 9,348,000 cases and 16,310 deaths in 2017, according to the report. Since 2000, India has halved the number of malaria cases and deaths by at least two-thirds and is pushing to become malaria-free by 2030.

Pollution

AQI in poor category, may dip as wind slows (Hindustan: 201901204)

<https://epaper.hindustantimes.com/Home/ArticleView>

Delhi's air quality deteriorated further into the 'poor' category on Tuesday as the wind speed slowed down and the temperature dropped.

The average overall air quality index (AQI) on Tuesday was recorded at 282, according to the Central Pollution Control Board (CPCB) bulletin— a dip from Monday's 279.

The minimum temperature on Tuesday was 9 degree Celsius, up by a notch compared to Monday's 8 degrees. The maximum temperature was 24.4 degree Celsius, a degree below season's normal.

Scientists warned that from Wednesday, the temperature and the air quality are expected to take a dip.

"From Wednesday, the wind will get slower and there is a forecast of shallow to dense fog in the morning hours. On Tuesday, the average wind speed during the day was about 8kmph," Kuldeep Srivastava, head of IMD's regional weather forecasting centre, said.

Srivastava said as the week progresses, the minimum temperature will dip to reach nearly 7 degree Celsius. Another IMD scientist said there is a forecast of cloudy sky on Thursday, and the weekend is expected to get colder.

"The temperature is expected to go down from Thursday and the dense air and the low wind speed will hamper the dispersion of pollutants," said the senior scientist.

Yoga and Physical Fitness

Breaking down News: Take My Breath Away (The Indian Express: 201901204)

<https://indianexpress.com/article/india/india-others/breaking-down-news-take-my-breath-away/>

Three gurus who made yoga, an ancient Indian practice cool in the West

Make yoga part of school curriculum, says Vice President Venkaiah Naidu

International Yoga Day: Shilpa Shetty, Twinkle Khanna, Bipasha Basu and others inspire people to practice Yoga

International Yoga Day, Yoga, Yoga Day, Rajpath Yoga, Narendra Modi, Modi Yoga, BJP, BJP Yoga, Time Now, Indian Express “Gently wopen your ice.” The sonorously southern invitation to gaze dewy-eyed upon a transformed Rajpath set the keynote for Yoga Day. In the media, the event marked the eye of the Lalit Modi storm, bringing half an hour of peace, quiet and soothing primal sound in the early hours of Sunday. The band-baaja struck up again soon enough, though. Times Now waved aloft a document bearing Vasundhara Raje Scindia’s signature, endorsing Lalit Modi. The Kolkata Telegraph front-paged a photograph of the prime minister at rest on Rajpath in the Makarasana, with the headline: “Wake Up and See the Sign”. Almost TS Eliot, no?

The sight of the prime minister, just one yoga mat’s length ahead of the rest, leading the nation in the pursuit of peace and quiet, was much easier on the eyes than the absurd Soviet ritual of January 26, when Rajpath bristles with Brahmoses and bhangra dancers in equal numbers. But I caught the programme on YouTube, where the peace was routinely disturbed by the world’s dumbest mobile app ad, in which a blonde who has misplaced most of her clothes goes about shooting people for failing to download apps fast enough.

Besides, an unseen reporter from a Hindi channel, overcome by the idea that Narendra Modi was mixing with the common herd, yammered constantly in the background about the PM’s latest feats. Why did his performance astonish the media so much? One of the better traditions of the RSS is that its leadership routinely drills with the foot-soldiers. But the media seemed to read it like a story from the Betal Panchvimshati, in which the king goes out into his city and mingles unrecognised.

While an energetic participant, the PM did not live up to the expectation of flexibility warranted by his reputation as a routine practitioner. But the steel frame of the administration gave a good account of itself. Though perceived to be too rigid and turgid for the rigours of yoga, bureaucrats and clerks did not collapse in a breathless heap of safari suits as anticipated.

Advertising

Modi’s BJP always picks up serious media miles from its campaigns, and this one had an international footprint, with Sushma Swaraj observing the day in New York, Arun Jaitley in San Francisco, JP Nadda in Hyderabad and so on. Amit Shah had targeted Patna, perhaps to dare Nitish Kumar, who had observed the previous week that Shah would benefit enormously, physically and mentally, from the practice of yoga. He spoke on yoga but did not do it. That would have been tempting fate.

The week's big regional story claims that India had helped to train hundreds of activists of the Pakistani opposition Muttahida Qaumi Movement in the use of weapons and explosives. The story is currently unverifiable, since it relies on quotes from unnamed officials, but the fact that it was run by the BBC gives it weight in the popular perception.

The big international communications story of the week is OneWeb, Richard Branson's satellite internet venture, in which Bharti Enterprises has invested. Apart from the revolutionary possibilities in telemedicine, distance education and disaster management, it could revolutionise the delivery of media. Like, the Yoga Day show on NDTV had this fat, pointless headline across the bottom of the screen obscuring the elegant footwork of the Vrikshasana. If this were an interactive digital feed, it could have been turned off. Imagine turning off all the cascading numbers in the opening bell shows on the business TV channels, which do not contribute significantly to comprehension. Imagine stripping the loud headlines and inflated claims off Arnab Goswami's scene, and maybe some loud and absurd participants, too. Gently wopen your ice. A new and better age is dawning.

Arsenic and iron in water

Arsenic and iron in water: 30,000 rural habitations affected, 20,000 in two states (The Indian Express: 201901204)

<https://indianexpress.com/article/explained/telling-numbers-arsenic-and-iron-in-water-30k-rural-habitations-20k-in-2-states-6149466/>

Iron is the most common contaminant of drinking water, with over 18,000 rural habitations affected, followed by salinity that affects roughly 13,000 rural habitations, arsenic (12,000), fluoride (nearly 8,000) and heavy metal.

Among rural habitations in Indian states, 55,511 face quality issues with drinking water. As of November 27 this year, 3.22 per cent of rural habitations across all states and UTs, accounting for 3.73 per cent of the population, were consuming drinking water with quality issues, according to data tabled by the Ministry of Jal Shakti in Parliament.

Iron is the most common contaminant of drinking water, with over 18,000 rural habitations affected, followed by salinity that affects roughly 13,000 rural habitations, arsenic (12,000), fluoride (nearly 8,000) and heavy metal.

Rajasthan has the highest number of rural habitations affected by contamination overall, at 16,833. Most of these – 12,182 – are affected by salinity in drinking water, at 12,182.

Source: Ministry of Jal Shakti

In terms of arsenic and iron pollution, West Bengal and Assam are the worst affected. Of the 30,000-odd rural habitations where drinking water is affected by either of these contaminants, over 20,000 are in West Bengal and Assam.

West Bengal has the highest number of rural habitations affected by arsenic contamination, at 6,207, followed by Assam (4,125), Bihar (804), Punjab (651) and Uttar Pradesh (650). Assam has the highest number of rural habitations affected by iron contamination, at 5,113. It is followed by West Bengal (5,082), Tripura (2,377), Bihar (2,299) and Odisha (2,100)

States and UTs that are not affected by any of these contaminants include Andaman & Nicobar Islands, Goa, Gujarat, Himachal Pradesh, Ladakh, Manipur, Mizoram, Nagaland, Puducherry, Sikkim and Tamil Nadu.

Don't miss from Explained: How seeds are planted from a helicopter, or with darts

Disease

These blood markers may indicate a higher risk of disease and death (Medical News Today: 201901204)

<https://www.medicalnewstoday.com/articles/327206.php#5>

A new study suggests that some readings from routine blood tests could help identify people at higher risk of disease and death related to disease. Doctors currently use the readings as markers of immune condition and inflammation.

New research singles out blood markers that could identify people at risk of disease and premature death.

The study investigators analyzed 12 years of data from 31,178 participants in the National Health and Nutrition Examination Survey (NHANES Trusted Source).

They found that those with low levels of lymphocytes, a type of white blood cell, were more likely to die from heart disease, cancer, and respiratory illnesses, such as pneumonia and influenza.

The analysis showed that the link between low lymphocytes — a condition called lymphopenia — and higher risk of disease and death did not vary with age or other common risk factors.

However, the predictive power of the low lymphocyte count increased when the scientists added two other measures of blood abnormality: one relating to inflammation and the other to the ability to maintain a supply of red blood cells.

The research is the work of teams from the University Hospitals Cleveland Medical Center, in Ohio, and other institutions. They report their findings in a recent JAMA Network Open paper.

Using markers from routine blood work

"Scientists have gone to great lengths and expense to develop novel biomarkers to identify people at the highest risk for death and disease," says study author Jarrod E. Dalton, Ph.D., who co-led the investigation.

"Here," he adds, "we have taken a more pragmatic approach — investigating the predictive power of components of a patient's white blood cell count, which is collected as part of routine blood work during standard health exams."

Dalton is an epidemiologist at the Cleveland Clinic's Lerner Research Institute.

In their study paper, he and colleagues remark on the increasing availability of drugs that target the immune system to treat established disease. These treatments seek to either reduce or boost immune activity, depending on the underlying relationship to disease.

However, they urge that there is also a great and unmet need for tools and methods to help prevent immune-related diseases in the general population in the first place.

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Around 20–40% Trusted Source of white blood cells are lymphocytes. A shortage of lymphocytes leaves the body susceptible to infection.

While scientists have recognized that a low lymphocyte count is a strong risk factor for premature death in people with a particular heart valve condition, there has been little research on its value as a more general predictor of survival.

In the new study, the researchers wished to discover whether lymphocyte counts could be an effective way to assess the risk of disease and disease-related death in a nationally representative adult population.

They performed the analysis with lymphocyte count on its own, then together with two other markers.

The two additional markers were red blood cell distribution width (RDW) and C-reactive protein (CRP).

RDW is a measure of how well the body can produce and maintain a healthy supply of red blood cells. CRP is a marker of inflammation.

The analysis linked low lymphocyte count with reduced survival both on its own and in conjunction with other blood markers, especially RDW and CRP.

'Convenient and inexpensive' screening tool

From the analysis, the researchers conclude that around 20% of the general adult population of the United States appear to have a high risk profile, according to these markers.

In addition, they calculated that the chance of dying within the next 10 years for those with the highest risk profiles was 28%, compared with only 4% for those with the lowest risk profiles.

The team suggests that with more research, it should soon be possible to understand the biological nature of the relationship between these markers and disease. Such knowledge could help identify suitable treatment targets.

In the meantime, it should be possible to help doctors use the markers to identify those with the highest risk of premature death as part of routine preventive care and screening.

"The complete blood count test is convenient, inexpensive, and — as our findings suggest — may be used to help physicians screen for and prevent disease and disease-related mortality."

Dental Health

Brushing your teeth may keep your heart healthy (Medical News Today: 201901204)

<https://www.medicalnewstoday.com/articles/327208.php#5>

New research finds that brushing the teeth three or more times a day significantly reduces the risk of atrial fibrillation and heart failure.

Brushing your teeth three times or more a day may significantly protect the heart.

The bacteria in our mouths may hold the key to many facets of our health.

Researchers have found intriguing clues about pancreatic and esophageal cancer risk in mouth bacteria, and some studies have linked poor oral hygiene with respiratory problems.

Mounting evidence is also strengthening the link between oral health and cardiovascular health.

For instance, some studies have found oral bacteria in the blood clots of people receiving emergency treatment for stroke, and experts have linked severe gum disease with a significantly higher risk of hypertension.

Conversely, destroying "friendly" oral bacteria that help maintain a healthy and balanced oral microbiome could disrupt blood pressure levels and also lead to hypertension.

Maintaining good oral health, therefore, seems to be key to cardiovascular health.

Now, new study that appears in the European Journal of Preventive Cardiology suggests that regular toothbrushing may keep heart failure and atrial fibrillation (A-fib) — a type of arrhythmia — at bay.

Dr. Tae-Jin Song of Ewha Womans University in Seoul, Korea, is the senior author of the new study.

In their paper, Dr. Song and team explain that the motivation for the study hinges on the mediating role of inflammation. They write, "Poor oral hygiene can provoke transient bacteremia and systemic inflammation, a mediator of atrial fibrillation and heart failure."

Studying A-fib, heart failure, and oral hygiene

In their study, Dr. Song and team examined atrial fibrillation's associations with both heart failure and poor oral hygiene. They used data from 161,286 people who were part of the Korean National Health Insurance System-Health Screening Cohort.

A-fib is a condition affecting at least 2.7 million people in the United States. In people with A-fib, the heart cannot efficiently pump blood to the rest of the body because it does not beat regularly.

The heart also does not pump blood as it should in people with heart failure. This inefficiency results in fatigue and, sometimes, breathing difficulties, as insufficient oxygen reaches the other organs in the body.

The participants of the current study were 40–79 years old and had no history of either A-fib or heart failure. During enrollment, which took place between 2003 and 2004, the team

measured the height and weight of each of the participants and asked them questions about their lifestyle, oral health, and oral hygiene habits.

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The participants also underwent some laboratory tests, which included blood tests, urine tests, and blood pressure readings.

Brushing lowers heart failure risk by 12%

Over a median follow-up period of 10.5 years, 4,911 participants received a diagnosis of A-fib, and 7,971 developed heart failure.

Brushing the teeth three times or more a day was linked with a 10% lower chance of developing A-fib and a 12% lower risk of heart failure.

Confounding factors — including age, sex, socioeconomic status, physical activity, alcohol intake, body mass index, and other coexisting conditions, such as hypertension — did not influence these results, as the researchers accounted for them in their analysis.

The authors conclude:

"Improved oral hygiene care was associated with decreased risk of atrial fibrillation and heart failure. Healthier oral hygiene by frequent toothbrushing and professional dental cleanings may reduce risk of atrial fibrillation and heart failure."

However, they also note that, as with any observational study, the research is limited and cannot explain causation. The study is also limited because it only looked at people living in one country, so the results may not be generalizable.

Nonetheless, notes the study's senior author, "We studied a large group over a long period, which adds strength to our findings."

Study strengths and limitations

In an accompanying editorial, authors Pascal Meyre, from the Cardiovascular Research Institute at the Basel University Hospital in Switzerland, and David Conen, from the Population Health Research Institute, McMaster University, Canada, offer a critical look at the findings.

They agree that the strengths of the study "are the large sample size, with over 160,000 individuals included in the study, the large number of outcome events, and the long follow-up duration."

"This allowed the investigators to carry out meaningful analyses and adjust the multivariable models for many covariates, such that some of the confounding could be controlled," they add.

However, the retrospective design of the study "may have introduced selection bias," say the authors of the editorial. Furthermore, the participants' "level of education, marital status, and information on inflammatory biomarkers, such as C-reactive protein, were not available."

The information on toothbrushing and oral hygiene habits was self-reported, which might subject it to recall bias, write Meyre and Conen.

"The causality of these associations is unclear, and it is certainly too early to recommend toothbrushing for the prevention of [A-fib] and [congestive heart failure]," they conclude:

"While the role of inflammation in the occurrence of cardiovascular disease is becoming more and more evident, intervention studies are needed to define strategies of public health importance."

Stem cell

Stem cell discovery could improve treatments for leukemia, other diseases (Medical News Today: 201901204)

<https://www.medicalnewstoday.com/articles/327191.php#5>

The inability to get human blood stem cells, or hematopoietic stem cells (HSCs), to self-renew in the laboratory is holding back progress in treating leukemia and other blood diseases.

Scientists have found a way to boost the ability of blood stem cells to renew themselves.

Now, a new study from the University of California, Los Angeles (UCLA) suggests that the answer may lie in a particular protein — the activation of which can greatly expand HSCs in culture.

The UCLA team found that a protein called MLLT3 is a key regulator of HSC function. The protein is present at high levels in the HSCs of human fetuses, newborns, and adults. However, cultured HSCs have low levels of MLLT3.

In a recent Nature paper, the researchers report how manipulating the gene responsible for making the protein led to a "more than 12-fold expansion of transplantable" HSCs.

The senior author of the study paper is Hanna K. A. Mikkola, a professor of molecular, cell, and developmental biology at UCLA. She has been studying HSCs for more than 20 years.

"Although we've learned a lot about the biology of these cells over the years," says Mikkola, "one key challenge has remained: making [HSCs] self-renew in the lab."

"We have to overcome this obstacle to move the field forward," she adds.

HSCs need powerful ability to self-replicate

All tissues and cells of the body rely on blood cells for nourishment and protection. To fulfill such a relentless and onerous task, blood cells must be able to replenish themselves. In adults, blood cells and skin cells have the greatest replenishment capacity of any tissue.

The job of making new blood cells falls to HSCs. Every day, the human body makes billions of new blood cells, thanks to HSCs, which also make immune cells.

HSCs reside in bone marrow, where they self-renew and mature into different types of blood and immune cells.

People with certain diseases of the blood or immune system — such as leukemia — need fresh supplies of HSCs to make new cells. For decades, doctors have used bone marrow transplants to boost their supplies.

However, there are limits on the extent to which bone marrow transplants can offer a solution. For instance, it is not always possible to find a matching donor, or the recipient's body might reject the transplanted cells.

Another problem that can arise is that the number of transplanted HSCs may not be enough to generate sufficient blood or immune cells to treat the disease.

The problem with cultured HSCs

Scientists have tried to culture HSCs in the laboratory as an alternative to bone marrow transplants. However, various attempts to transplant cultured HSCs have hit a common problem: HSCs that scientists have removed from bone marrow soon lose their capacity for self-renewal in culture.

Once HSCs lose the ability to make new copies of themselves, the only future that they have is either to differentiate into specialized cells or to die.

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For the new study, Prof. Mikkola and her team looked at what happened to genes as the HSCs lost their ability to self-renew in the laboratory.

They saw that some genes switched off when this happened. The genes that switched off varied according to the types of cell that the HSCs formed.

To take a closer look, the team generated HSC-like cells from adult pluripotent stem cells that could not self-replicate and then observed their gene activity.

This experiment showed that there was a strong link between the self-renewal ability of HSCs and the activity of the MLLT3 gene.

Active MLLT3 is a necessary condition

It seems that high expression of MLLT3 ensures a plentiful supply of its protein, which bears the instructions necessary for HSCs to self-renew.

The protein helps the HSC's machinery keep working while the cell makes a copy of itself.

Further experiments revealed that inserting an active MLLT3 gene into the nucleus of HSCs in laboratory culture increased their ability to self-replicate by a factor of 12.

"If we think about the amount of blood stem cells needed to treat a patient, that's a significant number."

Prof. Hanna K. A. Mikkola

Other studies that have tried to get HSCs to self-renew in culture have used small molecules. However, Prof. Mikkola and her team experienced problems with that approach.

They found that the cells were not able to maintain the levels of MLLT3 protein, and they did not work well when the team transplanted them into mice.

Combining the two methods

The team found that combining the small molecule method with MLLT3 gene activation generated HSCs that integrated properly into bone marrow in mice.

Those HSCs also produced all the correct types of blood cells and retained their ability to self-renew.

A concern that scientists have about producing transplantable HSCs in the laboratory is ensuring that they operate correctly once they are in the body.

The HSCs have to be able to self-replicate at the right pace, and they must not acquire mutations that could lead to diseases such as leukemia.

It appears that ensuring stable levels of MLLT3 protein meets these requirements.

The researchers are now working on methods of manipulating MLLT3 more safely and easily.

LeukemiaBlood / HematologyCancer / OncologyStem Cell Research

Bacteria (Navbharat Times: 201901204)

<http://epaper.navbharattimes.com/details/78779-54080-1.html>

आपके मेकअप बैग में भी तो नहीं छिपा बैक्टीरिया ?



■ **आईएनएस** : अगर आप रोजाना मेकअप का इस्तेमाल नहीं करते तो भी उनके प्रोडक्ट्स जैसे मेकअप ब्रश, ब्यूटी ब्लेंडर आदि को बार-बार साफ करने की

लाइफ जरूरत होती है। एक रिसर्च में इसका खुलासा

किया गया है। यूएस की एस्टन यूनिवर्सिटी के वैज्ञानिकों ने एक रिसर्च की है। उन्होंने आईलाइनर, लिपस्टिक, मस्कारा, ब्यूटी ब्लेंडर, लिप ग्लॉस आदि पर टेस्ट किए। इसमें सामने आया कि ब्यूटी ब्लेंडर में सबसे ज्यादा बैक्टीरिया रहता है। रिसर्च के अनुसार औरतें ब्रश से ज्यादा ब्यूटी ब्लेंडर का इस्तेमाल करती हैं। अक्सर लोग इसे जमीन पर गिरा देते हैं। ऐसे में उसमें बैक्टीरिया आ जाता है। इतना ही नहीं कई बार लोग उन्हें एक्सपायरी डेट के बाद भी इस्तेमाल करते रहते हैं जो बहुत ही गलत है। इसे आंखों, मुंह के पास इस्तेमाल करते हैं जिससे स्किन से जुड़ी समस्याएं हो सकती हैं।

Superbrug (Hindustan: 201901204)

https://epaper.livehindustan.com/imageview_419655_83897950_4_1_04-12-2019_20_i_1_sf.html

खतरा : सौंदर्य प्रसाधनों में खतरनाक सुपरब्रग मिले

लंदन | एजेंसी

कई प्रकार के सौंदर्य प्रसाधनों जैसे ब्यूटी ब्लेंडर, मस्करा और लिप ग्लॉस में प्राणघातक सुपरब्रग का संक्रमण पाया गया है। अमेरिका में हुए एक हालिया शोध के बाद शोधकर्ता ने यह चेतावनी दी है।

अमेरिका की एस्टन यूनिवर्सिटी के प्रमुख शोधकर्ता अमरीन बशीर ने कहा, यूके में हर दिन लाखों लोग सौंदर्य प्रसाधनों का इस्तेमाल करते हैं। यह उत्पाद संभावित घातक बैक्टीरिया जैसे ई.कोली और स्ट्रेप्टोकोकोस से संक्रमित होते हैं क्योंकि इन्हें साफ नहीं किया जाता और ज्यादातर समय एक्सपायरी डेट के बाद भी इस्तेमाल

किया जाता है।

त्वचा में संक्रमण पैदा कर सकते हैं बैक्टीरिया : जर्नल ऑफ अप्लाइड माइक्रोबायोलॉजी में प्रकाशित शोध के अनुसार 10 में से नौ सौंदर्य उत्पादों में ऐसे बैक्टीरिया पाए गए हैं जो त्वचा में संक्रमण पैदा कर सकते हैं और इससे खून भी विषाक्त हो सकता है। इन उत्पादों का आँखों, मुँह और कटे-छिले स्थानों पर इस्तेमाल करने से संक्रमण तेजी से फैलता है। इन उत्पादों से उन लोगों को सबसे ज्यादा खतरा होता है जिनको रोग प्रतिरोधक क्षमता कमजोर होती है।

स्पॉन्ज में सबसे ज्यादा बैक्टीरिया: शोधकर्ताओं के अनुसार नए ब्यूटी ब्लेंडर यानी मेकअप उत्पाद चेहरे पर



लगाने के लिए इस्तेमाल किए जाने वाले स्पॉन्ज में सबसे ज्यादा मात्रा में बैक्टीरिया पाए गए हैं। 93 फीसदी ब्यूटी ब्लेंडर को साफ नहीं किया जाता जिसकी वजह से इसमें खतरनाक बैक्टीरिया पाए गए हैं। 64 फीसदी ब्लेंडर को मेकअप करते

10 में से नौ उत्पादों में ई.कोली नामक बैक्टीरिया पाए गए हैं

93 फीसदी ब्यूटी ब्लेंडर को कभी साफ ही नहीं किया जाता है

समय कई बार जमीन पर गिरा दिया जाता है। इस स्पॉन्ज का इस्तेमाल चेहरे पर फाउंडेशन लगाने और चेहरे को कॉन्टूर करने के लिए किया जाता है। इनका सेलिनैट्री द्वारा काफी प्रचार किया जाता है और दुनिया भर में हर

कड़े नियम बनाए गए

यूरोपियन यूनियन गाइडेंस ने सौंदर्य प्रसाधनों को साफ-सफाई को लेकर कड़े नियम बनाए हैं और कहा है कि नए सौंदर्य प्रसाधन में ई.कोली बैक्टीरिया का संक्रमण नहीं मिलना चाहिए। शोध के अनुसार सौंदर्य प्रसाधनों के इस्तेमाल में बरती गई साफवाही का सबसे बड़ा कारण कड़े कानूनों का पालन न होना है।

साल 65 लाख ब्यूटी ब्लेंडरों की बिक्री होती है।

शोधकर्ताओं ने पाया कि यह ब्यूटी ब्लेंडर ज्यादातर गीला छोड़ दिया जाता है जिसकी वजह से इसमें बैक्टीरिया का प्रसार होता है। शोधकर्ता बशीर ने कहा, सौंदर्य

उत्पादों में मौजूद ई.कोली जैसे बैक्टीरिया चेहरे पर संक्रमण का कारण बनते हैं। ऐसे में उपभोक्ताओं द्वारा ब्यूटी ब्लेंडर और ब्रश को साफ सफाई न करना चिंता का कारण है। शोध के निष्कर्षों के अनुसार उपभोक्ता अनजाने में खुद को खतरों में डाल रहे हैं। वहाँ, इन सौंदर्य प्रसाधनों के निर्माताओं और नियम बनाने वाले संस्थान को भी उपभोक्ताओं की सुरक्षा के लिए और काम करने की जरूरत है।

उन्होंने सलाह दी कि सौंदर्य उत्पादों पर एक्सपायरी डेट और साफ-सफाई करने के बारे में निर्देश बड़े शब्दों में लिखे होने चाहिए ताकि उपभोक्ता उनका पालन करें।

Child Health (Hindustan: 201901204)

https://epaper.livehindustan.com/imageview_419655_83903578_4_1_04-12-2019_20_i_1_sf.html

सामान्य सर्दी-जुकाम का वायरस गर्भनाल के पार जा रहा

गर्भ में पल रहे भ्रूण तक पहुंच सकता है वायरस

चिंताजनक

वाशिंगटन | एजेसी

ठंड के दौरान होने वाले सर्दी-जुकाम का वायरस महिलाओं के गर्भनाल को पार कर भ्रूण को भी संक्रमित कर सकता है। एक हालिया शोध के अनुसार गर्भवती महिला को सर्दी-जुकाम होने पर इसका वायरस अजन्मे बच्चे तक भी पहुंच सकता है।

प्रहरी की तरह काम करती है गर्भनाल : अमेरिका की तुलेन यूनिवर्सिटी के शोधकर्ताओं ने कहा कि गर्भनाल गर्भावस्था के दौरान प्रहरी की तरह काम करती है और बच्चे तक पोषण और ऑक्सीजन पहुंचती है। साथ ही जीवाणुओं को बच्चे तक पहुंचने से रोकती है और उसके विकास में मदद करती है। गर्भनाल ही बच्चे को मां के शरीर से जोड़ती है।

पत्रिका प्लोस वन में प्रकाशित शोध में कहा गया कि पहले माना जाता था कि गर्भनाल में घुसपैठ नहीं की जा सकती। लेकिन, हाल में किए गए शोधों से पता चलता है कि जीका वायरस गर्भनाल की बाधा को पार कर भ्रूण को संक्रमित कर रहे हैं। शोधकर्ता जियोवानी पीडीमोटे ने कहा, हमारे शोध



- गर्भनाल में मौजूद एक कोशिका में पनप सकता है सर्दी जुकाम का वायरस
- इन वायरस से संक्रमित होने वाले बच्चों को आगे चलकर अस्थमा हो सकता है

गर्भनाल की भूमिका

गर्भनाल महिला के ही शरीर का अभिन्न अंग होता है, जो गर्भावस्था के दौरान बच्चे को सुरक्षा और पोषण देने का काम करती है। बच्चा इसी के सहारे मां के गर्भ में जीवित रहता है। गर्भवती महिला इसी नाल के माध्यम से अपने बच्चे से जुड़ी होती है। यह बच्चे को कई तरह के संक्रमण से सुरक्षित रखने का काम करती है।

से पहली बार यह साबित हुआ है कि सामान्य सर्दी-जुकाम का वायरस भी गर्भनाल को पार कर भ्रूण को संक्रमित कर सकता है। इस शोध से पता चलता है कि अगर किसी गर्भवती महिला को सामान्य सर्दी-जुकाम हो जाता है तो वह वायरस मां के साथ-साथ भ्रूण तक भी पहुंच सकता है और जन्म से पहले ही उसे संक्रमित कर सकता है।

गर्भनाल पर परीक्षण : शोधकर्ताओं ने दान किए गए गर्भनाल से तीन प्रमुख कोशिकाओं को निकाला। ये कोशिकाएं साइटोट्रोफोब्लास्ट, स्ट्रोमा फिब्रोब्लास्ट और होफबाउर कोशिकाएं हैं। लैब में

शोधकर्ताओं ने इन कोशिकाओं को रिस्पाइरेट्री सिंकेशियल वायरस के संपर्क में रखा। इस वायरस से सर्दी-जुकाम होता है। साइटोट्रोफोब्लास्ट कोशिकाएं इस वायरस को रोकने में कामयाब रहीं, लेकिन स्ट्रोमा फिब्रोब्लास्ट व होफबाउर कोशिकाओं में इस वायरस से संक्रमित होने का खतरा ज्यादा था। शोधकर्ताओं ने कहा कि होफबाउर कोशिकाओं ने वायरस को अपने अंदर फैलाने का मौका दिया। चूंकि यह कोशिकाएं गर्भनाल से होते हुए भ्रूण तक पहुंचती हैं, इसलिए यह वायरस के भ्रूण तक पहुंचने का कारण बन सकती हैं।

Smoking (Hindustan: 201901204)

https://epaper.livehindustan.com/imageview_419655_83900144_4_1_04-12-2019_20_i_1_sf.html

सिगरेट छोड़ने पर छह दिन छुट्टी

पहल

टोक्यो | एजेसी

धूम्रपान से सिर्फ स्वास्थ्य पर ही नहीं बल्कि कार्यक्षमता पर भी बुरा असर पड़ता है। कार्यालय में कामकाज के दौरान बार-बार धूम्रपान करने जाने से होने वाली समय की बर्बादी भी कार्यक्षमता पर असर डाल रही है। इस परेशानी से निपटने के लिए एक जापानी कंपनी ने अपने कर्मचारियों के सामने अनोखा प्रस्ताव रखा है।

जापान में एक कंपनी धूम्रपान छोड़ने के लिए अपने कर्मचारियों को

टोक्यो प्रशासन ने भी कठोर नियम बनाया

जापान में कंपनियां बढ़ते धूम्रपान पर अंकुश लगाने के लिए कई कदम उठा रही हैं। टोक्यो प्रशासन ने भी टोक्यो ओलंपिक 2020 को ध्यान में रखते हुए पिछले साल धूम्रपान रोकने के लिए सख्त नियम बनाया है। हालांकि, यहां के डांस बार में बैठकर सिगरेट पीने की इजाजत है।

छह दिन की अतिरिक्त सवैतनिक छुट्टी का प्रस्ताव दे रही है। यह प्रस्ताव ऐसे समय कंपनी की पॉलिसी में शामिल किया गया है, जब सिगरेट ब्रेक से कर्मचारियों की कार्यक्षमता पर सवाल किए जा रहे थे।

समय की होती है बर्बादी: दरअसल, टोक्यो स्थित मार्केटिंग फर्म पिआला आईएनसी का ऑफिस बहुमजिला इमारत के 29वें

माले पर है। जिस भी कर्मचारी को सिगरेट पीनी होती है, उसे नीचे बेसमेंट में जाना होता है। इसमें कर्मचारी को 'सिगरेट ब्रेक' में करीब 15 मिनट का वक्त लगता है।

इससे वे कर्मचारी ज्यादा नाराज थे, जो सिगरेट नहीं पीते थे, क्योंकि उन्हें रिफ्रेशमेंट के लिए किसी तरह का कोई अतिरिक्त समय भी नहीं मिलता था।

A I (Hindustan: 201901204)

https://epaper.livehindustan.com/imageview_419655_83899190_4_1_04-12-2019_20_i_1_sf.html

एआई से मस्तिष्क में लगी चोट की पहचान होगी

लंदन | एजेन्सी

शोधकर्ताओं ने एआई (कृत्रिम बुद्धिमत्ता) आधारित एक नई प्रणाली विकसित की है, जिससे मस्तिष्क की घातक चोट (टीबीआई) का पता लगाया जा सकता है। इस प्रणाली से डॉक्टरों को टीबीआई के रोगियों का उपचार करने में मदद मिलेगी। टीबीआई यानी 'ट्रॉमेटिक ब्रेन इंजरी' मृत्यु का एक वैश्विक कारण है।

फिनलैंड में हेल्सिंकी यूनिवर्सिटी के शोधकर्ताओं ने कहा, टीबीआई के मरीज बेहोशी में रहते हैं, जिससे डॉक्टरों के लिए इलाज के दौरान उनकी स्थिति का सही तरीके से जांच करना काफी चुनौतीपूर्ण होता है। यह अध्ययन साइंटिफिक रिपोर्ट नामक जर्नल में प्रकाशित हुआ है। शोधकर्ताओं ने कहा, हमने एआई आधारित एल्गोरिद्म

शोध

- वैज्ञानिकों ने दो एल्गोरिद्म तैयार किए हैं
- नई एआई प्रणाली 80 से 85% सटीकता से करती है पहचान

विकसित किया है, जो व्यक्तिगत रूप से रोगियों के परिणामों का अनुमान लगाता है और उनकी स्थिति के बारे में वस्तुनिष्ठ आंकड़े देता है।

अध्ययन के सह-लेखक राहुल राज ने कहा, इससे पहले कि हम इस तरह के एल्गोरिद्म को क्लिनिकल प्रैक्टिस में लागू करें, इसके लिए अभी कुछ समय लगेगा। अध्ययन में पाया गया है कि यह नई एआई प्रणाली 80 से 85 फीसदी सटीकता के साथ 30 दिन के अंदर रोगी की मौत की संभावना का अनुमान लगा सकती है।

Anemia

खरटि से निजात दिला सकता है फेस मास्क, अध्ययन में खुलासा बढ रहे हैं स्लीप एपनिया के मामले (Dainik Jagran: 20191204)

<https://www.jagran.com/world/united-kingdom-novel-face-mask-can-help-combat-sleep-apnoea-and-snoring-19814092.html>

शोधकर्ताओं ने पाया है कि रात में सोते समय फेस मास्क पहनने से ना सिर्फ ऊर्जा के स्तर में सुधार हो सकता है बल्कि उन लोगों को भी लाभ हो सकता है जो स्लीप एपनिया से पीड़ित हैं।

लंदन, आइएनएस। शोधकर्ताओं ने पाया है कि रात में सोते समय फेस मास्क पहनने से ना सिर्फ ऊर्जा के स्तर में सुधार हो सकता है बल्कि उन लोगों को भी लाभ हो सकता है, जो स्लीप एपनिया से पीड़ित हैं। नींद संबंधी इस विकार का संबंध खरटि और रात में सांस संबंधी समस्या से है। सीपीएपी मशीन नामक मास्क की सलाह अभी सिर्फ उन लोगों को दी जाती है, जो स्लीप एपनिया से गंभीर रूप से पीड़ित होते हैं।

इंपीरियल कॉलेज लंदन के शोधकर्ताओं ने स्लीप एपनिया से मामूली रूप से पीड़ित करीब 200 रोगियों पर किए गए अध्ययन के आधार पर उक्त निष्कर्ष निकाला है। प्रमुख शोधकर्ता मैरी मोरेल ने कहा, 'स्लीप एपनिया के मामले बढ रहे हैं। पहले यही माना जाता था कि ज्यादा वजन वाले लोग ही इससे प्रभावित होते हैं, लेकिन इस विकार की चपेट में महिलाएं, बुजुर्ग और बच्चे तक आ सकते हैं। इस विकार के करीब 60 फीसद मामले गंभीर नहीं होते, लेकिन अभी तक यह पता नहीं था कि ऐसे रोगियों के लिए सीपीएपी मददगार हो सकता है।'

इससे इतर 'द न्यूयॉर्क टाइम्स' की एक रिपोर्ट में बताया गया है कि रातों की नींद खराब करने वाले खरटि गंभीर बीमारियों की चेतावनी भी हो सकते हैं। खरटि ऑब्स्ट्रक्टिव स्लीप एपनिया (ओएसए) का लक्षण होते हैं। स्लीप एपनिया यानी ओएसए सोते समय अचानक सांस बाधित होने की समस्या को कहा जाता है। इसी की वजह से इंसान को खरटि आते हैं। हालिया अध्ययनों के मुताबिक, यह परेशानी दिल की बीमारियों, स्ट्रोक, डायबिटीज और कैंसर जैसी जानलेवा बीमारियों की वजह बन सकती है।

अमेरिकन अकेडमी ऑफ स्लीप मेडिसिन के मुताबिक, लगभग नौ फीसद महिलाएं और 24 फीसद पुरुष ओएसए की समस्या से जूझ रहे हैं। ज्यादातर प्रौढ़ और बड़ी उम्र के लोग इसके शिकार होते हैं। यही नहीं रिपोर्ट में यह भी कहा गया है कि करीब 10 में नौ लोगों की बीमारी का इलाज संभव है, लेकिन जांच नहीं होने की वजह से बीमारी का इलाज नहीं हो पाता है। रिपोर्ट के मुताबिक, ओएसए की समस्या से ग्रसित व्यक्ति की नींद पूरी नहीं हो पाती है जिससे उसके शरीर को और दिमाग को आराम नहीं मिल पाता है। इससे उसे दूसरी बीमारियां ग्रसित कर लेती हैं।

Cancer

अब नए तरीके से हो सकेगा पैंक्रियाटिक कैंसर का उपचार (Dainik Jagran: 20191204)

<https://www.jagran.com/world/other-now-pancreatic-cancer-can-be-treated-in-a-new-way-19814079.html>

पैंक्रियाटिक कैंसर को साइलेंट किलर भी कहा जाता है क्योंकि आरंभ में इस कैंसर को लक्षणों को पहचान पाना मुश्किल होता है।

यरुशलम, आइएएनएस। पैंक्रियाटिक कैंसर यानी अग्नाशय में होने वाला कैंसर सभी मौजूदा उपचारों को लेकर प्रतिरोधी होता जा रहा है। ऐसे में इस बीमारी से पीड़ित रोगियों के बचने की उम्मीद कम होती जा रही है। लेकिन एक नए अध्ययन से इस बीमारी के उपचार की नई उम्मीद जगी है। अध्ययन में एक मॉलीक्यूल में ऐसी क्षमता पाई गई है, जिससे पैंक्रियाटिक कैंसर सेल्स को खुद ही खत्म होने के लिए प्रेरित किया जा सकता है।

आंकोटारगेट नामक जर्नल में छपे अध्ययन के अनुसार, यह निष्कर्ष चूहे पर किए गए अध्ययन के आधार पर निकाला गया है। इस चूहे में ह्यूमन पैंक्रियाटिक कैंसर प्रत्यारोपित किया गया था। इस दौरान शोधकर्ताओं ने पाया कि इस इलाज से लगभग 90 फीसद कैंसर कोशिकाएं खत्म हो गईं। इजरायल की तेल अवीव यूनिवर्सिटी की शोधकर्ता मलका कोहेन-अरमन ने कहा, 'हमने एक ऐसे तंत्र का पता लगाया है, जो कैंसर सेल्स को खुद ही खत्म होने का कारण बनता है।'

पैंक्रियाटिक कैंसर को साइलेंट किलर भी कहा जाता है, क्योंकि आरंभ में इस कैंसर को लक्षणों को पहचान पाना मुश्किल होता है और बाद के लक्षण प्रत्येक व्यक्ति में अलग-अलग दिखाई देते हैं, जिसके आधार पर यह पहचान करना मुश्किल होता है कि यह कैंसर है या कोई अन्य बीमारी। सामान्यतः इस कैंसर के लक्षणों में एब्डोमेन के ऊपरी हिस्से में दर्द होता है, भूख कम लगती है, तेजी से वजन कम होने की दिक्कतों के साथ पीलिया, नाक में खून आना, उल्टी होना जैसी समस्याएं सामने आने लगती हैं। शोधकर्ताओं ने कहा नए तरीके से इस कैंसर के उपचार की उम्मीद जगी है।

गर्भनाल

गर्भनाल के जरिये भ्रूण तक पहुंचकर मां के साथ-साथ बच्चे के स्वास्थ्य पर डालता है असर (Dainik Jagran: 20191204)

<https://www.jagran.com/world/america-by-reaching-the-fetus-through-the-umbilical-cord-the-virus-affects-jagran-special-19814025.html>

गर्भनाल के जरिये भ्रूण तक पहुंचकर मां के साथ-साथ बच्चे के स्वास्थ्य पर डालता है असर अमेरिका की टुलाने यूनिवर्सिटी के शोधकर्ताओं ने किया दावा।

वाशिंगटन, प्रेट्र। जुकाम का वायरस गर्भनाल के जरिये भ्रूण की कोशिकाओं तक पहुंच सकता है। इससे गर्भवती महिलाओं के साथ-साथ उनके अजन्मे बच्चे भी प्रभावित हो सकते हैं। एक नए अध्ययन में यह दावा किया गया है। इस शोध में अमेरिका की टुलाने यूनिवर्सिटी के शोधकर्ता भी शामिल थे। शोधकर्ताओं ने कहा, 'गर्भनाल शरीर का एक अंग है जो गर्भावस्था के दौरान गर्भाशय में विकसित होती है। गर्भ में पल रहे बच्चे के लिए यह एक द्वारपाल का काम करती है। यानी जीवाणुओं और विषाणुओं से उनकी रक्षा करती है और मां के जरिये भ्रूण को आवश्यक पोषण भी देती है।'

पीएलओएस वन नामक जर्नल में प्रकाशित अध्ययन में बताया गया है कि भ्रूण का यह सुरक्षा चक्र अभेद्य नहीं है क्योंकि जीका के वायरस इस चक्र को आसानी से भेद जाते हैं। टुलाने यूनिवर्सिटी के शोधकर्ता और इस अध्ययन के सह-लेखक गिओवन्नी पीडिमोंटे ने कहा, 'इस अध्ययन में पहली बार यह पता लगाया है कि एक साधारण जुकाम का वायरस मनुष्य की गर्भनाल को कैसे संक्रमित कर सकता है।' पीडिमोंटे ने कहा, 'यह अध्ययन हमारे सिद्धांत के अनच्छूप है। जब एक महिला गर्भावस्था के

दौरान जुकाम से संक्रमित होती है तो इसका वायरस के भ्रूण में भी फैल सकता है और जन्म से पहले ही बच्चे के फेफड़ों में संक्रमण फैल

गर्भनाल के अध्ययन के दौरान शोधकर्ताओं ने इसमें पाई जाने वाली तीन प्रमुख कोशिकाओं साइटोट्रोफोब्लास्ट, स्ट्रोमा फाइब्रोब्लास्ट्स और हॉफबॉयर को अलग कर कर इनमें जुकाम के लिए जिम्मेदार वायरस का पता लगाया, जो सामान्य सर्दी-जुकाम का कारण बनता है। शोधकर्ताओं ने कहा, 'साइटोट्रोफोब्लास्ट कोशिकाएं एक सीमा तक जुकाम के संक्रमण को झेलने में सक्षम थी, वहीं अन्य दो खतरनाक संक्रमणों के लिए भी ये अतिसंवेदनशील थी।' कोशिकाओं की जांच के दौरान शोधकर्ताओं ने पाया कि हॉफबॉयर कोशिकाएं संक्रमण से बच गई थी, पर इसकी दीवारों की झिल्लियों पर वायरस जरूर देखे गए। ये कोशिकाएं गर्भनाल जाती हैं और इसकी दीवारों पर चिपके वायरस इसके जरिये भ्रूण तक पहुंचकर उसे संक्रमित कर सकते हैं।

क्यों जरूरी है गर्भनाल

गर्भनाल महिला के ही शरीर का ही अंग होता है। इसी के सहारे बच्चा मां के गर्भ में जीवित रहता है। यह शरीर में लैक्टोजन के बनने में मदद करती है, जो मां के शरीर में दूध बनने की प्रक्रिया को प्रेरित करता है। मां जो कुछ भी खाती है, इसके जरिये से उसका पोषण बच्चे को भी मिलता है। गर्भनाल बच्चे के लिए फिल्टर की तरह भी काम करती है। यह उस तक सिर्फ पोषण पहुंचाती है और विषैले पदार्थों को भ्रूण तक जाने नहीं देती है। बच्चे के जन्म के कुछ दिनों बाद नाल खुद ही सूखकर गिर जाती है। इसका काम बच्चे को मां के गर्भ में बच्चे को पोषण और विकास के लिए आवश्यक तत्व देने का है।